MED Integration Guidance

Certain Mobile Electronic Devices (MEDs), such as portable GPS appliances or smartphones can deliver useful functionality as stand-alone units powered (for a while) by their embedded battery and using their self-contained device speaker(s) and microphone. An external adaptor power cable that connects to the cigarette lighter receptacle can serve to keep the device alive on a long trip.

However, to significantly upgrade the communications management capability of your classic Porsche® 911 (Porsche® is a registered trademark of Dr. Ing. h.c. F. Porsche AG.) and create a truly transformed, modern, travelling experience, it makes sense to go the next step and hardwire your touchscreen device for behind the dashboard power and integrate its audio functionality into the vehicle's stereo system to enable high quality sound interaction through the vehicle's speakers.

This document presents some background guidance and suggests some website resources to help you with this transformative MED integration process.

There are many portable touchscreen devices, so we can't cover all of them here. Furthermore, the life cycle of MED product models (especially smartphones) is getting shorter and shorter. It seems that new devices with expanding capability arrive every twelve to eighteen months. The number of portable, after-market GPS navigation device models is enormous. Smartphone hardware choices are even more extensive.

Also, just as there are many different personal MEDs available to attach to PCAR MOUNTS bracket systems, there are also, numerous in-dash stereo head units that have been retrofit to classic Porsche 911s to replace original vintage audio systems. Stock units, if they still work, are getting pretty old and aging even more quickly in comparison to the amazing new technology seen in today's automotive electronics. If MED integration is something you choose to undertake, it's assumed that you have or will have retrofitted your vehicle with an updated stereo receiver.

Because every classic Porsche owner who is considering a PCAR MOUNTS bracket system is likely to have a custom situation regarding specific MED to mount and specific vehicle stereo hardware for audio integration, there's no practical way to provide step-by-step details on device docks, cables, connections, and stereo set-up operations for every circumstance. What is possible, however, is to elaborate a specific example (I'll show you what I did) and as noted above, provide some links to a number of 3rd party websites to help you define a MED docking and integration pathway for your specific needs.

And ---- while I'm sure that there are many classic 911 enthusiasts who consider DIY as the preferred pathway for any and all projects, there are others who may be more comfortable having a stereo

specialist handle the MED integration ---- To be honest; I used a combination of DIY effort and specialist help.

An Example (Here's what I did for my car)

Android Smartphone (Motorola Droid 3) integrated with the Becker CDR 220 Radio *(Note: I have recently upgraded my phone to a Motorola RAZR MAXX HD which uses the same integration cables)*

Some classic 911 owners have retrofitted their vehicles with new stereo radio/amplifiers that deliver great modern performance but with aesthetics that were never part of the classic Porsche heritage. Others, like me, wanted to upgrade the car's audio system but also wanted to stay with components that had a "Porsche look and feel"

Don't get me wrong, there are some great stereo head units that fit the classic 911 and provide for iPod/mp3 connections, Bluetooth phone links, and look good. Rennlist and other discussion forums describe stereo upgrades using systems from Pioneer, Kenwood, Sony, Parrot, Nakamichi, Blaupunkt, Becker, and others.

My 1995 993 which I purchased in 2004, came with a Becker CR-1 radio with cassette player and old, tired, failing speakers. A previous owner had fitted the system with a six-slot Alpine CHM-5620 CD changer in the trunk. When the radio finally gave out, I decided to stay inside the Porsche heritage arena and upgraded to a Becker CDR 220 Head unit with Porsche faceplate and removed the trunk mounted CD changer. I also replaced all the speakers but made sure that the original speaker covers were usable such that the car looks stock.

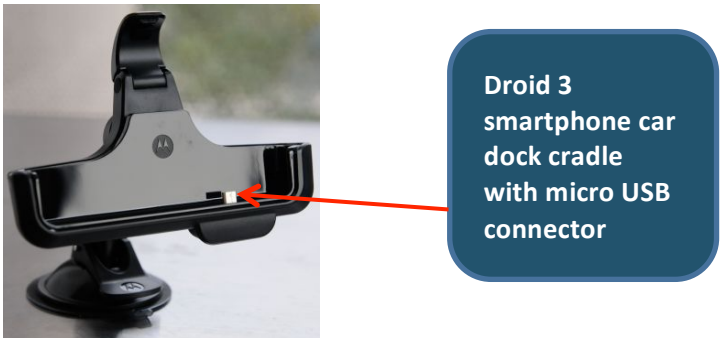
Becker CDR-220 Stereo Head Unit

With a new stereo receiver, CD player, and new speakers, my 993 sound system performed as a modern vehicle should. What was seriously missing for me, however, was GPS navigation. Phone connectivity and access to my digital music library and playlists were also high on my want list, but it was "nav." capability that was in the # 1 spot. I guess I had developed a latent dependency on in-dash visual maps and turn by turn instructions from our other family cars).

I considered installing a stand-alone, portable GPS appliance but then decided that my indispensable smartphone with its Google Maps app. was the way to go. Also, by integrating my multi-function

smartphone into the vehicle's new upgraded stereo and audio system, I could get "nav.", phone connectivity, my digital music library, and internet radio.

- My smartphone was an Android Motorola Droid 3 unit and I purchased a Motorola car docking unit customized for this phone. Power input and audio output use a micro USB connector. It's getting time to replace the Droid 3 but the description below remains relevant and, I believe, useful. (as noted: *now replaced with a Motorola RAZR MAXX HD and similar companion dock)*



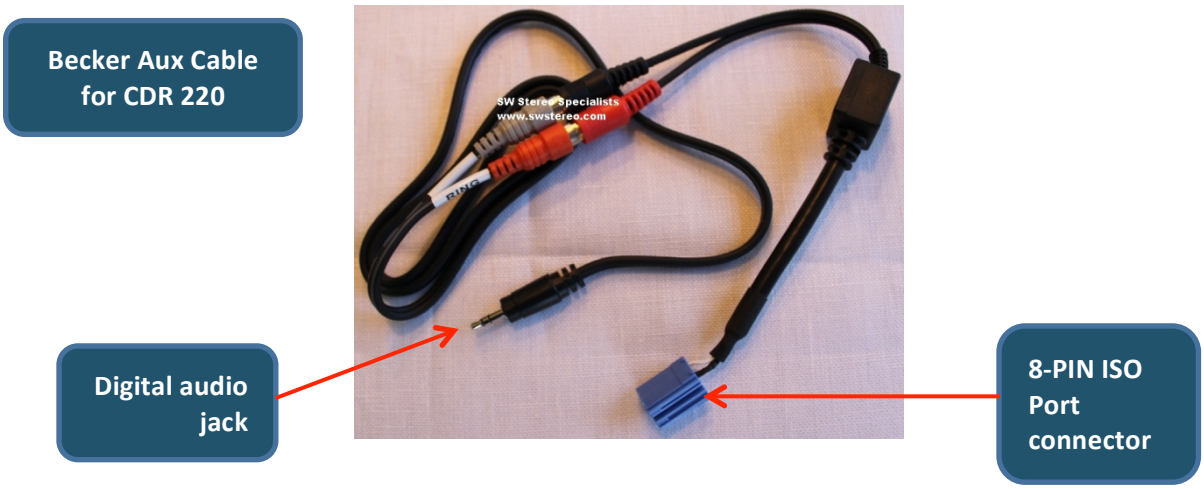
- The Motorola Droid 3 smartphone car docking cradle came with an integrated ball and socket connector designed to fit a 17mm ball --- just like the one supplied with the PCAR MOUNTS bracket system

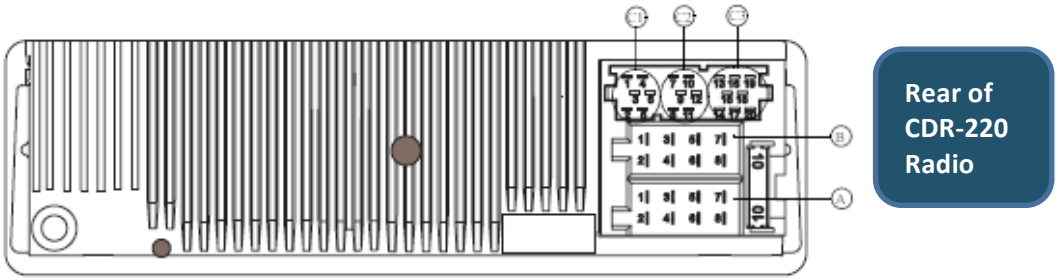
- The ball and socket adapter nut supplied with the cradle was tightened to stabilize and fine tune the positioning of the touch screen of the docked smartphone for perfect, driver line-of-sight interaction

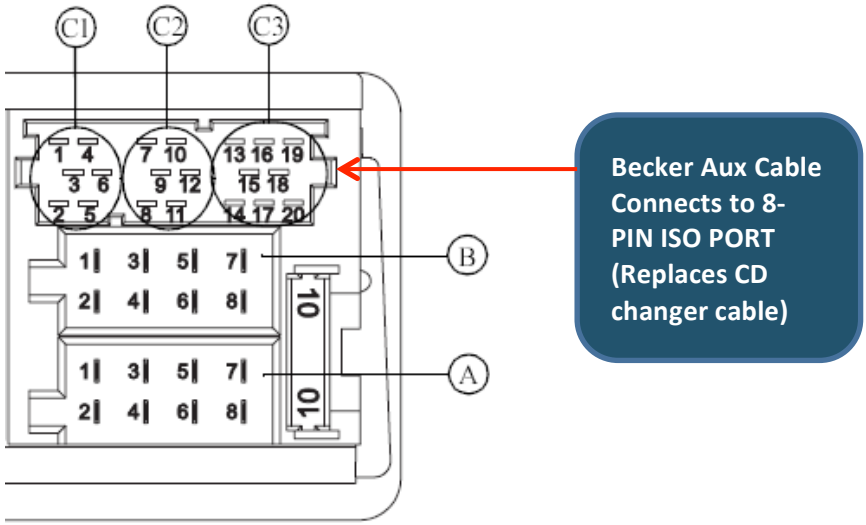
With the smartphone mounted and positioned in a perfect driver line-of-sight position with a clean, “factory look” installation, my next step was to get it hardwired for power and sound.

Here’s what I did

- I contacted Becker (www.swstereo.com) and purchased their auxiliary component connecter cable for the CDR 220



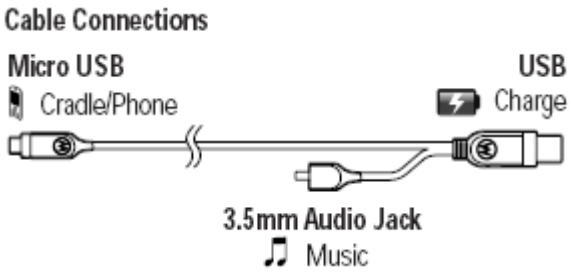




www.pcarmounts.com

- Motorola Droid 3 (*and the RAZR MAXX HD*) uses a micro USB connector cable for power and digital audio connectivity
  - The splitter cable supplied with the Motorola car dock kit connects the docking cradle to the CDR 220 radio via the Becker supplied auxiliary cable (above) and to a power source via the iSimple IS43 cable (below)

USB plug for power connects to female USB receptacle adaptor of IS43 cable (below)
3.5mm female audio connector accepts the Becker Aux cable jack (above)
Micro USB plug that connects to the Droid 3 docking cradle



- A Female USB Adapter cable from iSimple (IS43) was used for powering the Droid 3 smartphone
  - The male USB plug from the Motorola cable above was connected to the IS43 female USB adaptor and the power and ground wires of the IS43 cable were spliced into the vehicle's cigarette lighter wiring – (my local car stereo specialist did the set-up)

iSimple HubVolt DM IS43 Cable
Female USB receptacle connector for Motorola USB plug (above)
Power and ground wires are spliced into cigarette lighter wiring

- With my Droid 3 smartphone vehicle dock (*now a RAZR MAXX HD dock*) connected to my Becker CDR 220 stereo head unit and wired for power, there is a simple procedure to activate Auxiliary Input operation with the radio. If you disconnected the battery (recommended), you will need to reset the radio **CODE** before proceeding.
  - Turn radio **ON**
  - Press and hold the **"TP"** button on the face plate for about 8 seconds until **Becker 1** is displayed
  - Turn the tuning knob until **AUX OFF** is displayed
  - Press either button located directly under the Arrows on the display to change the present setting from **OFF** to **ON**
  - Turn the radio **OFF**
  - Turn the radio back **ON**
  - Press **"CD"** button to enter **AUX Mode**

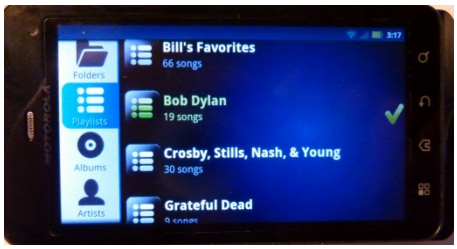
- With my Droid 3 smartphone (*now RAZR MAXX HD*) mounted and integrated with my 993's retrofit Becker CDR 220 stereo head unit, I began to explore Android apps to transform the touchscreen of the phone to a "digital dashboard"
  - Here are some screenshots for two great Digital Dashboard apps

Car Dashboard Pro

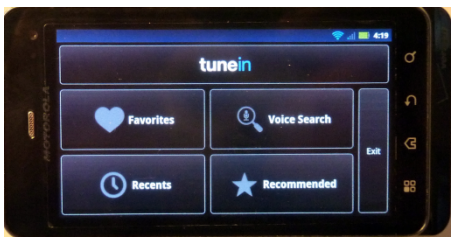
Provides Digital readout of GPS speed, compass direction, altitude, time, temp

Shortcut icons for Voice Commands, Phone, Navigation, and Music

Shortcut icons for Voice Search, NPR Podcasts, and Internet Radio



Alinq app for digital music (large font size is unique)



TuneIn Radio app for internet radio (car mode screen)

Car Home Ultra

Provides Digital readout of GPS speed, compass direction, altitude, time, temp

Shortcut Icons for Voice Commands, Phone, Navigation, Music, and internet radio

Both touchscreen Digital Dashboard formats provide for customized shortcut links, 20 for Car Dashboard Pro and up to 30 for Car Home Ultra. Have some fun checking these out.

iPhone Integration

Many Classic Porsche 911 owners, for certain, will be looking to mount, dock, and integrate their iPhone with their stereo head unit. There is an enormous body of information on various discussion boards and 3rd party supplier websites on pathways to execute this project.

Here's some information that I uncovered that may be useful to you.

Car Docks

A high quality device docking cradle is essential for convenience, durability, aesthetics, and a clean factory look. While there are a number of "so called" universal phone cradles, a device docking cradle customized for a specific smartphone generally provides for better performance.

Some smartphone manufacturers offer vehicle mounting accessories that comprise a customized docking cradle attached to a universal mounting system, most of which use a suction cup design that works pretty well for windshield mounting ---- but is not practical for a small car like the classic Porsche 911. However, it's the device docking cradle that we want.

Among smartphone manufacturers, Motorola makes some of the best docking cradles in my opinion. They are custom designed and matched for each new model in their line-up of Droid smartphones. The quality of their car docking accessory was a consideration for me, in selecting a Droid.

Apple, unequivocally, designs and manufactures amazing MEDs, but leaves most accessories to 3rd party suppliers. Unfortunately, they do not make an Apple docking cradle for their iPhones and other MEDs --- a pity.

In searching the web for high quality device docking cradles for Apple's line-up of iPhones, you may want to take a look at ProClip USA's product offerings at their proclipusa.com website. They have a huge selection of mobile mounting solutions for many different MEDs and several docking cradles for iPhones that seem to be quite high quality. The cradle below for the iPhone 5 with a case is item # 514423.

Becker and other manufacturers of stereo head units supply (or recommend) cables and adapters for the integration of mobile electronic devices with their systems. Auxiliary input capabilities are common to most modern head units. The cable below can connect iPhones with the 30 pin connector for power input and audio output to the Becker CDR 220 head unit as well as certain other Becker models

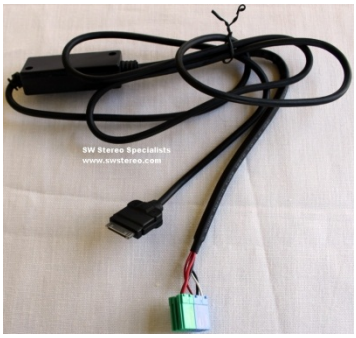
iP-BKR2 iPod Adapter for Becker Radios with "AUX" Menu option

discountcarstereo.com › iPod Adapters & Interfaces

The iP-BKR2 adapter cable connects directly to the **ISO PORT** on the Becker CDR 220 Radio. Volume control on the radio sets the listening level. This cable is also compatible with 1998-02 Porsche Becker Traffic Pro, Mexico CD (7803, CC4325, CC4327, CD4337, CC4370), CDR-22, CR-220, CDR-220, Monza. The iP-BKR2 is approximately **5ft. long** with 8/6-PIN ISO plugs on one end and Apple 30-Pin dock connector on the other.

www.pcarmounts.com

SWS Stereo Specialists also have a cable to connect the iPhone with 30 pin adapter to the CDR 220.



The iPhone 5 with the lightning pin connector requires a different cable setup.

Please see the **ACCESSORIES PAGE** and **Accessory Bulletin** of the PCAR MOUNTS website for additional information on MED docking cradles for other smartphones.

Accessory Bulletin